

CHAPTER 142. APPROVE TRAINING COURSE OUTLINES (TCO) FOR A FEDERAL AVIATION REGULATIONS (FAR) PART 141 PILOT SCHOOL

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

- Initial/New or Major Revision: 1368
- Added Ratings (Per Rating): 1369

3. OBJECTIVE. The objective of this task is to determine if TCO's for a FAR Part 141 Pilot School are acceptable (including initial certification and amendment). Successful completion of this task results in approval or disapproval of a TCO.

5. GENERAL. TCO approval may be granted for initial certification of the school, for amendment of a course, or for addition of a course to an existing school certificate. Each course of training requires a separate TCO. Approval of a TCO would result in placing the course on the air agency certificate and a list of approved courses for the school. This entitles the school to train and certify pilots for that particular rating. Addition of, or amendment to, a TCO for an already certified school constitutes an amendment of the air agency certificate held by the school. Definitions of the terms used in this Chapter are located in Volume 2, Chapter 140 of this Handbook.

A. Authority. FAR Part 141, Subpart C describes the requirements for TCO's in detail.

B. Background. An applicant for, or the holder of, a school certificate must obtain Federal Aviation Administration (FAA) approval for each course of training to be given by the school.

(1) A careful review of each TCO or special curriculum submitted for approval must be made to ensure compliance with the provisions of FAR Part 141, Subpart C, and to ensure that the TCO reflects appropriate completion standards.

(2) A pilot school may use standards higher than those contained in the FAA Practical Test Standards (PTS), but not less than those standards prescribed in the PTS.

(3) The actual content of a TCO is outlined in FAR 141.55 and in the appropriate appendix for that rating.

(4) Each TCO must support in full the syllabus on which it is based. The school must be able to show that it has the appropriate facilities, aircraft, and personnel, and is able to conduct training as described in the TCO.

7. EVALUATION OF TCO'S.

A. Initiation. The initial request for FAA approval of a TCO would come from an existing pilot school, or an applicant seeking certification as a FAR Part 141 pilot school. Approval of an amendment or addition is accomplished in the same manner as the original approval.

B. Maximum Course Time Parameters. FAR Part 141 does not require that a school specify maximum course times. All time parameters listed in a TCO or syllabus are minimum times. However, if a school submits a TCO that includes a maximum course time for that school, the following may be used as a general guide:

(1) For all courses of training, except those for turbojet type ratings, 20 percent over the course of time prescribed in the curricula in the Appendixes of FAR Part 141.

(2) For turbojet type ratings, 100 percent over the course time prescribed in Appendix F of FAR Part 141.

(3) For courses of training where a corresponding curriculum is not prescribed in the FAR Part 141 Appendixes, the inspector should use personal, best judgement.

C. TCO Content. Under FAR Part 141.55 (a), each TCO must have sufficient content to meet the appropriate curriculum requirements and must contain the following information:

(1) The TCO must describe the following:

(a) the room used for ground school training, including size and maximum number of students that may be instructed in the room at one time;

(b) the type of audiovisual aid, projector, tape recorder, mockup, aircraft component, and other special training aids used for ground training;

(c) each pilot ground trainer used for instruction; and

(d) the type of aircraft, including any special equipment, used for each phase of instruction.

(2) The TCO must list the airports at which training flights originate, and must include a description of the facilities, including pilot briefing areas that are available for use by the students and operations personnel at each of those airports.

(3) The TCO must include the minimum qualifications and ratings for each instructor who gives ground or flight training.

(4) The TCO must include a training syllabus for each course of training.

D. Training Course Syllabus Content. Each TCO must contain a training syllabus that is a “building block” progression of learning with provisions for regular review and evaluation at prescribed stages.

(1) Each applicant should be encouraged to develop training syllabi used in a format similar to that used in Appendix A of Advisory Circular (AC) 141-1, Pilot School Certification, as amended.

(2) The training syllabus must contain any prerequisites necessary for enrollment in the course, such as minimum pilot certificates and ratings, and the required class of medical certificate or statement of no medical deficiency (required for glider or balloon courses only).

(3) In addition, the training syllabus must contain any training, pilot experience, or special knowledge required for enrollment in the course.

(4) The training syllabus must contain a description of each lesson, including its objectives and standards, and the measurable unit of student accomplishment or learning to be derived from the lesson or course. The syllabus must include stages of training and the completion standards for each stage. Course, stage, and lesson objectives should be stated in relation to the performance expected of the student.

(5) Each course, stage, lesson objective, and completion standard should meet the following general criteria:

(a) Overall objectives should describe what students are expected to know or are able to do at the end of a particular course, stage, or lesson. Objectives should be stated in terms of desired student learning outcomes.

(b) Course objectives should state in broad terms the knowledge and skill goals to be reached by the student at the end of the course.

(c) More limited stage objectives should state desired student goals in specific areas of knowledge and skill.

(d) Consistent with the objective of the stage and course, lesson objectives should clearly specify the desired student outcomes for each lesson.

E. Assessing Course Content. The content must identify the specific subject matter that will be taught to develop the student’s knowledge and skills necessary to meet the course, stage, and lesson objectives and completion standards.

(1) The content must support the objectives, be arranged in a logical sequence, and be attainable within the estimated stage and course times.

(2) To accommodate for individual learning differences and other situations that may arise, reasonable variances in the timeframe should be considered when determining the adequacy of the estimated timeframes of lessons, stages, or courses.

F. Analysis and Review of Objectives, Content, and Completion Standards. Each training syllabus must be reviewed to ensure that it conforms to the various operational training areas and other requirements of the curriculum.

(1) The course, stage, and lesson content must provide adequate instruction to obtain the knowledge and skills prescribed in FAR Part 61.

(2) The scope of knowledge, procedures, and maneuvers to be included in each lesson is left to the discretion of the school. In no case, however, may the completion standards be less than those outlined in the appropriate PTS.

(3) The training syllabus should be reviewed for appropriate course content by an inspector experienced in the subject area. If qualified inspectors are not available in the Flight Standards District Office (FSDO), the regional office should be contacted to obtain an inspector with the necessary expertise who can provide an objective review of the course.

(4) The completion standards should state the observable, measurable level of knowledge and skill required at the end of the course, stage or lesson.

These standards should be consistent with the objectives.

G. Commercially Developed Training Syllabus. FAR Part 141 was amended to give full recognition to the ability of a certificated school to develop its own courses of training. There are, however, commercially developed syllabi (such as Jeppesen-Sanderson) available for use by FAR Part 141 schools. Many of these commercially developed syllabi have been reviewed at the national level, but none have been given approval. A FAR Part 141 school may elect to purchase a commercially developed syllabus and present it to the FSDO for approval. The FSDO completes the approval process in the same manner as for a syllabus developed and submitted by the school. When evaluating the school's use of a commercially developed syllabus, the inspector must determine whether the school fully understands the objectives and standards of the commercially developed syllabus and will be able to comply with it fully.

(1) Before approving a TCO that contains a commercially developed syllabus, the reviewing inspector shall take whatever action is necessary to ensure such understanding, recording these actions in the FSDO school file.

(2) A careful review of a commercially developed training syllabus should be made to determine whether the school can actually give the training in the manner described in the syllabus, and whether the syllabus completely supports the curriculum upon which it is based.

(3) Once a commercially developed syllabus has been approved by the FSDO, a school may use it as approved; however, if the school modifies the commercially developed syllabus, the FSDO must approve the modification.

(4) The producer of a commercial syllabus may decide to change that syllabus. If the pilot school wishes to amend its syllabus accordingly, it must obtain FSDO approval. The syllabus used by the pilot school must be the same as that used by the student; therefore, pilot schools should be alert to changes in course content by producers of commercial syllabi.

H. Contract Training. If a training contractor is used, verify that the contractor can provide the training specified in the TCO. The applicant may adapt a syllabus already in use by the contractor. If this syllabus is not already FAA approved, it must be approved following standard procedures.

I. Testing. The training syllabus must contain a description of the tests and checks used to measure a student's accomplishment at each stage of training.

Copies of each written stage and the final test should be submitted along with the TCO.

(1) During the development of a training syllabus, an appropriate number of stage tests must be included in ground training and flight courses.

(2) The conduct of stage tests is the responsibility of the chief flight instructor for the particular course of training. The chief flight instructor may authorize this stage check to be given by an assistant chief flight instructor or any other fully qualified instructor employed by the pilot school. However, the final check must be given by the chief or assistant chief flight instructor.

(3) Test results must be retained in the student training records to show the student's accomplishments in the enrolled course.

(4) The FAR Part 141 Appendices allow a certain amount of the time acquired during stage and final tests to be credited toward the ground training and flight time required by the particular curriculum.

9. SPECIAL CONSIDERATIONS.

A. Ground Trainers. The full extent to which a ground trainer is to be used in an approved training course should be clearly stated in the training syllabus. When a ground trainer is used in an approved training course, the full extent of that use should be clearly stated in the training syllabus, and the learning outcomes should be well defined. This is necessary to provide the instructor with proper guidance and give the FAA a baseline from which to judge the adequacy of the trainer to be used. FAR 141.41(a) prescribes the requirements for ground trainers that may be used to obtain the maximum flight training credit allowed for ground trainers in an approved pilot training course. The principal operations inspector (POI), Certificate Holding District Office or responsible FSDO are the authorized evaluators of flight training devices (FTD) at Level 5 and below. Prior to administering the evaluation of a Level 5 or lower level FTD, contact National Simulator Program Manager to obtain approval of the reference data used in a specific FTD. The National Simulator Team in Atlanta, GA must approve a Level 6 or above training device and any level of flight simulator.

(1) Ground trainers that do not meet the more complex requirements of FAR 141.41(a)(1) may be used for certain operations meeting the requirements of FAR 141.41(a)(2). The training syllabus must clearly define the use of ground trainers.

(2) Because of their limitations, full credit flight time is not to be allowed for instruction in FAR 141.41(a)(2) ground trainers. According to provisions

in FAR Part 141 Appendices A, C, D, E, and F, credit for instruction in a substitute ground trainer would be 50 percent or less than that for a FAR 141.41(a) ground trainer.

(3) Discretion must be used when approving a training syllabus that substitutes ground trainer instruction for the flight time required in a complex airplane. Any use of a ground trainer in lieu of flight time in a complex airplane must be justified with clearly stated objectives applied against the skills expected to be achieved.

(4) Approval of the TCO must be based on the ability of the ground trainer to provide effective training for the particular airplane.

B. Special Curricula. A pilot school or a provisional pilot school may apply for approval to conduct a special course of pilot training for which a curriculum is not contained in the appendices of FAR Part 141. Such special curricula must contain features that can be expected to achieve a level of pilot competency equivalent in scope and depth to that achieved by the curricula prescribed in the FAR Part 141 Appendices.

(1) The original and two copies of a proposed special curriculum must be submitted along with a cover letter requesting FAA approval at least 60 days before the training is scheduled to begin.

(2) Approval or denial should be accomplished within 30 days to allow the school sufficient time to develop a TCO based on the special curriculum.

(3) When a special curriculum is approved, each page of the original and of the office copies should be dated and signed by the POI. The original copy of the special curriculum must be returned to the school promptly.

11. ASSESSMENT RESULTS.

A. Approval for an Initial Certification. When an application for original certification is evaluated, the TCO detailing the specifics of each course is approved during the Document Compliance Phase. The certification team must be satisfied that the syllabus adequately measures the students' accomplishments at each stage of training. A chief flight instructor must be approved for each course of training (see Volume 2, Chapter 143 of this Handbook). When all certification requirements are met, approval is indicated on the application as detailed in Section 2 of this chapter. The TCO is approved by the certification team for an initial certification and by the POI for a renewal or amendment.

B. Additions to Current Air Agency Certificate. In order to add a course of training the applicant must

develop a TCO for that course. The applicant will have to meet the same requirements as those for initial certification. However, a certification team will not be designated. The TCO will be approved by an inspector assigned to review the application for amendment and the accompanying TCO.

C. Disapproval of TCO's. When a TCO is disapproved, the school may not train for that particular rating. The school is eligible to reapply when the discrepancies are corrected.

13. APPENDICES D, F, AND H.

A. Commercial Pilot Certification Course, Appendix D. FAR Part 141 Appendix D prescribes the requirements for a commercial pilot certification course leading to an airplane category rating. Upon successful completion of the commercial pilot certification course, the student is issued a graduation certificate that entitles the student to apply for a commercial pilot certificate under provisions of FAR 61.71(a).

(1) Unless the student is the holder of an instrument rating, upon successful completion of the FAA practical test the student is issued a commercial pilot certificate with cross-country and night flight limitations prescribed in FAR 61.129. Additionally, if the school elects to include all the training specified in the instrument rating course (Appendix C) in its commercial pilot certification course, and states this in the TCO, the student may then be issued a graduation certificate for the instrument rating course and may apply for an instrument rating after passing the practical test for the commercial certificate, or meeting the experience requirements of FAR 61.65(e). The student may elect to take both commercial and instrument practical tests on the same day or the same flight and may be issued a commercial pilot certificate with an instrument rating after successful completion of both tests. In any case, the student may have any cross-country and night flying limitations removed from the commercial pilot certificate after successful completion of the instrument rating practical test.

(2) Appendix D, paragraph (3)(c) of FAR Part 141 states that the course must consist of at least 100 hours of the flights listed in subparagraphs (1) through (4). Flight time as pilot-in-command (PIC) of an airplane carrying only persons who are pilots assigned by the school to specific flightcrew duties on that flight may be credited for not more than 50 hours of that requirement. The PIC time should be used to allow other students to observe during training flights. Other persons should not accompany the student for any other reason. However, for insurance purposes, the school may assign a well qualified pilot to the flight so the student who is acquiring PIC time in

a complex airplane, as required by Appendix D, paragraph 3(c)(3), is accompanied.

B. Aircraft Rating Course - Appendix F. A training syllabus for the aircraft rating courses listed in Appendix F, paragraph F of FAR Part 141 submitted for approval will meet the scope of Appendix A through D if it includes the appropriate stage and final tests (written and practical) and meets a comparable time ratio to FAR Part 61 requirements. Times may be shortened as indicated in the appendix.

(1) Minimum flight training time shown in a syllabus should meet the same ratio to FAR Part 61 flight experience requirements as those of Appendix A through D appropriate to the rating sought. For example, to determine the minimum time a syllabus must show for a course for an additional aircraft category rating to a commercial pilot certificate:

(a) Select the appropriate FAR Part 141 appendix. (In this example, use Appendix D.)

(b) Determine the flight training time ratio of Appendix D to FAR Part 61 flight experience time requirements, e.g., using Appendix D:

Total Flight Training Time (Appendix D)
Total Flight Experience Time (Part 61) = Percentage
 $190 \text{ hours} \div 250 \text{ hours} = 76\%$

(c) The minimum flight training time for this course is 76 percent of the applicable FAR Part 61 flight experience time requirements.

(2) Should an applicant request approval of a course for which FAR Part 61 does not establish minimum training/flight time prerequisites, the reviewing official should assure that the course contains features that can be expected to achieve a level of pilot competency equivalent to that achieved by a similar curriculum contained in the appendices of FAR Part 141 or in FAR Part 61, whichever is appropriate. For example, there is no minimum training/flight time established for a commercial pilot with an airplane category rating who wishes to add a rotorcraft category with a helicopter class rating to the commercial certificate.

(3) FAA policy requires an applicant to meet the criteria of FAR Part 141, Appendix F, to justify a

reduction in helicopter time. A minimum of 35 total time helicopter may be approved. The 35 hours of helicopter flight time may be all dual instruction. It is left to the discretion of the approving official to determine if any PIC or solo flight time is appropriate.

(4) Minimum time should be based on the same ratio of ground training to flight training as depicted in the appropriate Appendix A through D. For example:

Ground Training \div Flight Training = Percentage

$100 \text{ hours} \div 190 = 53\%$

C. Test Preparation Course - Appendix H. FAR Part 141, Appendix H, paragraph 4(a)(2)(i) provides that an approved course of training for an additional flight instructor rating course must consist of the performance and analysis of flight training maneuvers, which in the case of airplane and glider instructor ratings courses include the demonstration of spin entry, spins, and spin recovery techniques.

(1) Section 61.187(a)(1) through (6) provides that an applicant for a flight instructor certificate must have received flight instruction in the performance and analysis of standard flight training procedures and maneuvers, appropriate to the instructor rating sought, with an endorsement by the person who had given him the instruction that certifies that the applicant is competent to pass the practical test on the subjects listed therein. In addition, the certified flight instructor (CFI) applicant's flight instructor must meet the requirements of FAR 61.187(b).

(2) Consequently, an applicant for a flight instructor certificate with a rating in either airplanes or gliders must have had the instruction and endorsement stated for spin entry, spins, and spin recoveries in both directions. Therefore, when a CFI, rated either in airplanes or gliders, applies for the other aircraft category rating on his or her flight instructor certificate, training or testing in spins is not required by the FAR.

(3) Accordingly, a TCO for the addition of an airplane or glider category rating to a flight instructor certificate may stipulate that applicants holding either an airplane or glider category do not need to complete spin flight training when these requirements have previously been met.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of FAR Part 141, FAA policies, and qualification as an Aviation Safety Inspector (Operations).

B. Coordination. This task may require coordination with the airworthiness unit, AFS-630, and the National Simulator team, if applicable.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References.

- FAR Parts 1, 61, 91, 141, and other appropriate FAR
- AC 141-1A, Pilot School Certification, as amended
- Operator's current TCO's (if an amendment)

B. Forms.

- FAA Form 8000-4, Air Agency Certificate
- FAA Form 8420-8, Application for Pilot School Certificate

C. Job Aids.

- Sample letters and figures

5. PROCEDURES.

A. PTRS. Upon receipt of an original and two copies of each proposed TCO, open PTRS file for this task.

B. Application Review (Amendments only). Review FAA Form 8420-8 for completeness and accuracy (see Section 2, paragraph 9A in Volume 2, Chapter 141 of this Handbook).

(1) If the application is not complete or accurate, advise the applicant how to correct. If necessary, confirm in writing, and include a reasonable suspense date for submission of a new application. (Figure 142-1)

(2) If the application is acceptable, proceed with the TCO review.

C. TCO Review.

(1) Ensure that each TCO contains at least the following.

(a) A statement indicating which curriculum in FAR Part 141 or the name of the special curriculum upon which the TCO is based.

(b) A description of each room used for ground training, including its size, location, and the maximum number of students that may be instructed in the room at one time.

(c) A description of each type of audiovisual aid, projector, tape recorder, mockup, aircraft component, and any other special training aid to be used for ground training.

(d) A description of each pilot ground trainer used for instruction, in sufficient detail that the inspector can readily determine if the trainer may be used for the pilot training credit requested.

(e) A list of the airports where training flights originate.

(f) A description of school facilities, including pilot briefing areas available for use by the students and operating personnel at each of the originating airports.

(g) A description of the type (make and model) of each aircraft, including any special equipment used for each phase of instruction.

(h) The name of each chief flight instructor and assistant chief flight instructor who will instruct in the course.

(i) The minimum qualifications and ratings for each instructor who will instruct in ground or flight training.

(2) Check the qualifications of the chief instructor (and assistant chief instructor, if applicable), proposed for each TCO.

(a) If the chief instructors are qualified (FAR 141.35), proceed with the chief instructor practical test.

(b) If the chief instructor is not qualified, inform the applicant that the TCO cannot be approved

until a qualified candidate is offered. Establish a date for submission of the TCO with the new candidate's name and qualifications.

(3) If an airworthiness inspector is not available, inspect the aircraft to be used in the practical test to determine it is in compliance with FAR 141.39 and 141.75.

(4) Conduct the chief flight instructor practical test (see Volume 2, Chapter 143 of this Handbook). Conduct the practical tests for any assistant chief flight instructors at this time.

D. Approve TCO.

(1) Mark each page of the original TCO and of the office copy "FAA Approved." Sign and date each page. If no change has been made to the curriculum of a commercially developed syllabus, stamp the first page "FAA Approved."

(2) Return the original copy of the TCO to the school.

(3) Place the office copy in the FSDO file on the school.

(4) In the section marked "For FAA Use Only" on the application, indicate approval, provisional pilot school or pilot school, the effective date and expiration date of the certificate, and whether the application is an amendment. On the reverse side, make any necessary comments and sign. Request that the FSDO manager sign the application.

(5) If this is an amendment, prepare and issue the amended air agency certificate new list of

approved courses. Give the originals to the school, and place the copies in the school file.

E. Disapprove TCO.

(1) If the content of the TCO is incorrect, indicate how the TCO can be corrected. Set a suspense date for submission of a corrected TCO.

(2) If the TCO is disapproved because the chief instructor candidate failed the practical test, follow the procedures in Volume 2, Chapter 143 of this Handbook.

F. PTRS. Close PTRS file for this task.

G. Vital Information Subsystem File (VIS). Update Air Agency VIS.

7. TASK OUTCOMES. Completion of the task results in one of the following.

A. An approved TCO, an air agency certificate, and a list of approved courses with the new course indicated if the application is for a renewal or an amendment to an existing TCO; or

B. A record on file consisting of a letter notifying the applicant of denial of the new rating and an indication of the return of all original documents to the applicant; or

C. A letter indicating termination of the approval process at the applicant's request.

9. FUTURE ACTIVITIES. Review of the TCO during any future surveillance of the school.

FIGURE 142-1
LETTER DISAPPROVING SPECIAL CURRICULA OR TCO'S

FAA Letterhead

[*date*]

Carolyn Brannon
Brannon Aviation
Fairfax Airport
P. O. Box 123
Fairfax, VA 23456

Dear Ms. Brannon:

We are unable to approve your [*name of course*] Training Course Outline (TCO) [*or special curriculum*] for the following reasons:

All other TCO's (and/or special curricula) have been approved and are reflected in your list of approved courses. If you wish to continue to seek approval for the [*above course or special curriculum*], you may reapply when appropriate corrections have been made.

Sincerely,

[*POI's signature*]

